

BROOKS B. WILLIAMSON

Principal, Brooks Williamson and Associates, Inc.

EDUCATION

Eastern Michigan University, M.S., Individualized Studies (combination of Aquatic Biology and Coastal Geology), 1979

University of Connecticut, B.A., Biology/Geology, 1975

University of Alabama, postgraduate work

National Wetland Scientist Certification

EXECUTIVE SUMMARY

Mr. Williamson's professional experience is characterized by a dual commitment to both the public and private interest in environmental management. In his decade of association with federal and state agencies, Mr. Williamson acquired a detailed knowledge of the complexities involved in interpreting environmental policy. This experience includes administration of several environmental acts, including the Federal Clean Water Act, the Natural Resources and Environmental Protection Act 451 of 1994, Part 303 Wetland Protection and Part 301 the Michigan Inland Lakes and Streams Act. Since 1989, Mr. Williamson's work has been in the private sector, where his knowledge of government policy and his exposure to a full range of problems and resolutions has been invaluable in addressing the complex concerns of environmental problem solving.

PROFESSIONAL EXPERIENCE

Brooks Williamson and Associates, Inc., January 1989-present:

Principal. Company provides environmental consulting services specializing in wetlands, wetland regulation, lake and stream regulation, environmental impact assessment, site analysis, and assistance in site planning, as well as permit application services (Federal State and Local), alternative analyses, and mitigation plans.

Michigan Department of Natural Resources, May 1989:

Instructor of the Wetland Determination Pilot Program. Involved teaching a one week class of fifteen contract individuals. Information on wetland vegetation, soils and hydrology was presented and interpretation of the State Act (203) was discussed.

Michigan Department of Natural Resources, February 1985-January 1989:

Quality Specialist for the Pontiac Office of the Land and Water Management Division. Position requires the administration of the Goemaere-Anderson Wetland Protection Act, the Michigan Inland Lakes and Streams Act, the Floodplain Regulatory authorities, and the Michigan Great Lakes submerged Lands Act. Responsible for environmental review of projects ranging from \$500 to \$100 million pursuant to the above state laws.

U.S. Army Corps of Engineers, Regulatory Functions Branch, February 1981-February 1985:

Ecologist for the Detroit District. Responsibilities included administration of the enforcement portions of Section 404 of the Federal Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899).

U.S. Army Corps of Engineers, Great Lakes Hydraulics and Hydrology Branch, February 1980-February 1981:

Oceanographer for the Detroit District. Duties included impact analysis of coastal structures and dredging, design and implementation of shoreline monitoring projects and coordination of local portion of nationwide projects, basic design of new shoreline structures and repair of old.

Southeast Michigan Council of Governments, November 1979-February 1980:

Energy Analyst for the City of Detroit.

Eastern Michigan University, August 1978-November 1979:

Aquatic Biologist contracted to Detroit District Corps of Engineers, Environmental Resources Branch. Responsibilities included impact assessment of federal projects, contributing to or writing environmental impact statements or environmental assessments, impact analysis of dredge and fill projects (Section 404), placement of structures (Section 10), and design of research projects. Served as a U.S. member of review committee, and design of research projects. Served as a U.S. member of review committee (environmental considerations) for three International Joint committee studies on the Great Lakes.

TEACHING EXPERIENCE

Henry Ford Community College, Dearborn, Michigan, various dates:

Lecturer of a four credit Physical Geography class for three semesters.

Eastern Michigan University, August 1976-August 1978:

Teaching/Research Assistant in the Geography/Geology Department.

ADDITIONAL TRAINING

- Coastal Engineering Class, 40 hours
- Architect-Engineering Procedures and Negotiations Course, 40 hours,
- Environmental Protection Agency Storet Training Class, 40 hours
- Introduction to Supervision, 40 hours
- Wetlands Science II; Wetlands Specialist, 120 hours
- Wetlands Soils and Hydrology, 40 hours
- Environmental Laws and Regulations, 40 hours
- Michigan Department of Natural Resources, 40 hours
- Wetland Delineation, New Federal Method, 8 hours

PROFESSIONAL ORGANIZATIONS

- National Wetland Scientist Certification
- Society of Wetland Scientist
- Association of State Wetland Managers, Inc.

PUBLICATIONS

WILLIAMSON, BROOKS B., "The Potential Effect of Great Lakes Water Diversion on Wetlands and Animal Communities, "Proceedings of the Conference of Great Lakes Water Diversions, Western Michigan University, Kalamazoo, Michigan, 25 March, 1983, 6pp.

Williamson, Brooks B., "The Wetlands of Dickinson Island, St. Clair County, Michigan, and Their Response to Water Level Fluctuations," unpublished M.S. Thesis, Eastern Michigan University, Ypsilanti, Michigan, 1979.

Herdendorf, C.E. (ed.), "Fish and Wildlife Resources of the Great Lakes Coastal Wetlands Within the United States," published by the U.S. Fish and Wildlife Service, Washington, D.C., October, 1981 (13 vols.). [Contributor.]

Jaworski, E., C.N. Raphael, P.J. Mansfield, and B.B. Williamson, "Impact of Lake Level Change on Coastal Marshlands," Michigan State University, East Lansing, Michigan, Office of Water Research, Annual Report, 1979. "Coastal Wetlands Value Study in Michigan," Coastal Wetlands Value Study in Michigan," Michigan Department of Natural Resources, 1978, 209 pp.

PAPERS

Williamson, Brooks B., "Semi-Cyclic Great Lakes Wetland Changes," Michigan Academy of Sciences, Ypsilanti, Michigan, 25 March 1983.

Williamson, Brooks B., "The Potential Effects of Great Lakes Water Diversion on Wetlands and Animal Communities," Conference on Great Lakes Water Diversion: Critical Resource, 25 March 1983.

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Analysis of the MDEQ Report *"Report on the Impacts of Beach Maintenance and Removal of Vegetation under Public Act 14 of 2003"*

Low water levels in the Great Lakes from 1997 to near record lows in 2003 resulted in a band of wetland vegetation establishing with the corresponding drop in water levels. The vegetation developed in the normally shallow inundated bottomland below the previous high water elevation. In some circumstances, the condition resulted in limiting property owners' access to open water areas. In June of 2003, the Michigan Legislature enacted Public Act 14 of 2003, exempting owners of lakefront property on any of the Great Lakes and Lake St. Clair from having to obtain a permit before conducting maintenance activities such as mowing and removal of washed up aquatic vegetation on exposed bottomlands between the ordinary high water mark and existing waters edge. The legislation also allowed mechanical removal of certain types of vegetation for certain areas after obtaining a letter of approval or permit from the Director of the Michigan Department of Environmental Quality (MDEQ). In addition, the Michigan legislature required that the MDEQ analyze the impact of beach grooming and vegetative clearing activities. This requirement was very clearly stated in Public Act 14 of 2003 as:

"By January 1, 2006, the director shall prepare and submit to the senate majority leader, the speaker of the house of representatives, the standing committees of the legislature within jurisdiction primarily related to natural resources and environment, and the governor a report that evaluates the activities allowed under subsection (1), describes the impacts to the affected areas, and recommends statutory changes based upon the evaluation, if appropriate."

A report was produced by the MDEQ entitled "Report on the Impacts of Beach Maintenance and Removal of Vegetation under Act 14 of 2003", dated March 2006 (Exhibit A). This report states that the MDEQ used the assistance of research scientists in preparing this document to evaluate the impact of P.A. 14, and includes two reports in the attachments. A review of the MDEQ report and

supplementary materials suggests the MDEQ based its findings primarily on these reports. The Executive Summary of this document states on page 3 that "The following report fulfills that requirement." (as set forth in P.A. 14). This report provides an executive summary, background, of the history, the findings of the studies, and a series of five (5) recommendations.

According to the MDEQ, since the implementation of P.A. 14, the MDEQ received 90 such requests for P.A. 14 activities, and authorized approval for 78. A study of the effects of subsequent mowing and vegetative removal on exposed bottomlands between the ordinary high water mark and existing waters edge for a segment or meaningful fraction of these 78 sites was not prepared.

The attached studies included in the MDEQ report were valuable and important studies of Michigan coastal wetlands. The MDEQ apparently submitted this research in effort to meet the Legislative requirement; however, none of the research was specifically designed or undertaken for the purpose of evaluating the impacts of the maintenance activities as conducted under P.A. 14 per se. A review of the Freedom of Information Act files also included the materials and the proposals from the research scientists. Initially, it appears the studies were conducted to analyze coastal wetland systems at large in certain geographic areas, rather than specifically to address P.A. 14 authorized activities. Further, the proposed purpose of the studies conducted thus far, and yet to be conducted, as described in 2005 grant proposal, did not even identify a P.A. 14 impact study as one of their primary objectives. In fact, one study looked at a very small sample of these sites in 2004 and the work conducted did not intend to evaluate these impacts specifically.

The first study, dated March 2006, is entitled "The Effects of Coastal Wetland Fragmentation on Fish and Invertebrate Communities", undertaken by Dr. Donald Uzarski et al of Grand Valley State, stated its purpose. The overall objective was "...to explore the impact of wetland fragmentation on chemistry and biodiversity of plant, invertebrate and fish communities". The second study entitled "The Impacts of Various Types of Vegetation Removal on Great Lakes Coastal Wetlands of Saginaw Bay and Grand Traverse Bay" by Dr. Dennis Albert of the Michigan Natural Features Inventory, focused on evaluating a variety of impacts to coastal marshes from clearing, mowing, raking, filling and disking of vegetation. Most of the conditions and research sites did not involve sites that were approved by the MDEQ for P.A. 14 activity, nor for impacts strictly limited

to these levels of authorized activities. In fact, most sites significantly surpassed these levels in scope and degree.

Each study provides indispensable information in their respective areas, but neither report appeared to fully meet the defined requirements of the Michigan Legislature to specifically analyze beach grooming and vegetative clearing impact criteria as dictated under P.A. 14 for mowing and removal of washed up aquatic vegetation on exposed bottomlands between the ordinary high water mark and existing waters edge.

The Legislature placed the geographic limit on P.A. 14 activities to two areas, Saginaw Bay and Grand Traverse Bay. The two studies did examine coastal marshes in these areas. The geomorphology in these bays has resulted in long shallow bathymetric slopes that are readily revegetated as water levels drop and substrates become exposed. Extensive biological, chemical and physical data was developed for each of the areas addressed by the study. Interpretations of the data were made and assumptions on impacts were defined.

The Uzarski studies and the Albert studies on the coastal wetlands and subsequent report encompass research and examination beyond the scope of P.A. 14 allowable activities. The studies also included sites involving larger scale impacts such as dredged channels and canals, areas containing fill, and state parks beaches, as well as areas where maintenance activities have been undertaken for decades, not simply as a result of P.A.14 authorized activities.

The concept of a riparian owner maintaining access in a reasonable fashion to the open water of the lake has proven to be a controversial issue since the year 2000. As water levels dropped, after the high water period of 1996 and 1997, many waterfront property owners proceeded to maintain their frontages to allow for the use of their beach areas. In many locations, the removal of vegetation and providing a reasonable area for beach usage became a critical factor in the economic success of shoreline commercial facilities. This controversy resulted in the modification of Part 303, Wetlands, and Part 325, Great Lakes Submerged Lands, of 1994 Public Act 451. The Natural Resources and Environmental Protection Act (PA 451) was amended in 2003 to streamline the authorization process for beach maintenance and vegetation removal activities between the water's edge and the ordinary high water mark (OHWM) of the Great Lakes.

In evaluating the impacts of a project when submitted to the MDEQ for permit approval on Wetlands (Part 303), Lakes and Streams (Part 301), or the Great Lakes Submerged Lands (Part 325), the Department requires a full environmental assessment of each project. Under 303, A permit shall not be issued until an assessment of the project is undertaken. Section 303—indicates the need for this review and set forth a series of criteria that needs to be considered prior to permit issuance or denial.

Sec. 30311. (1) A permit for an activity listed in section 30304 shall not be approved unless the department determines that the issuance of a permit is in the public interest, that the permit is necessary to realize the benefits derived from the activity, and that the activity is otherwise lawful.

(2) In determining whether the activity is in the public interest, the benefit which reasonably may be expected to accrue from the proposal shall be balanced against the reasonably foreseeable detriments of the activity. The decision shall reflect the national and state concern for the protection of natural resources from pollution, impairment, and destruction. The following general criteria shall be considered:

- (a) The relative extent of the public and private need for the proposed activity.
- (b) The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity.
- (c) The extent and permanence of the beneficial or detrimental effects that the proposed activity may have on the public and private uses to which the area is suited, including the benefits the wetland provides.
- (d) The probable impact of each proposal in relation to the cumulative effect created by other existing or anticipated activities in the watershed.
- (e) The probable impact on recognized historic, cultural, scenic, ecological, or recreational values and on the public health or fish or wildlife.
- (f) The size of the wetland being considered.
- (g) The amount of remaining wetland in the general area.
- (h) Proximity to any waterway.

- (i) Economic value, both public and private, of the proposed land change to the general area.
- (3) In considering a permit application, the department shall give serious consideration to findings of necessity for the proposed activity which have been made by other state agencies.
- (4) A permit shall not be issued unless it is shown that an unacceptable disruption will not result to the aquatic resources. In determining whether a disruption to the aquatic resources is unacceptable, the criteria set forth in section 30302 and subsection (2) shall be considered. A permit shall not be issued unless the applicant also shows the following:
 - (a) The proposed activity is primarily dependent upon being located in the wetland.
 - (b) A feasible and prudent alternative does not exist.

Not only are the ecological impacts to be considered in the review process, but all other potential areas are to be weighed and balanced. Public interest and private interests are to be included in the analysis. This requires that the interests of riparian owners be weighed in contrast to the impacts anticipated. The interests of the waterfront owner also must be taken into account when considering what is prudent and feasible. True, there may be a number of ways to access the water. Construction of a boardwalk for three to six hundred feet may indeed be possible, but the construction of such a structure cost in the range of \$20,000 to \$50,000. This is beyond the realm of reason for most single family parcels, especially with the probability the structure will be destroyed by ice action as the water levels rise. This is likely not seen as a prudent investment.

Similarly, Part 325, Great Lakes Submerged Lands provides for an environmental assessment. Section 322.1015, Rule 15 requires that the Department not issue a permit unless certain criteria are met. This section states the following:

R 322.1015, Rule 15. In each application for a permit, lease, deed, or agreement for bottomland, existing and potential adverse environmental effects shall be determined. Approval shall not be granted unless the department has determined both of the following:

- (a) That adverse effects to the environment, public trust, and riparian interests of adjacent owners are minimal and will be mitigated to the extent possible.
- (b) That there is no feasible and prudent alternative to the applicant's proposed activity which is consistent with the reasonable requirements of the public health, safety, and welfare.

Again, at the time the law was written, the legislature anticipated that there would be controversy regarding the authorization of some projects. In order to properly evaluate the pros and cons of a project and to prevent a biased position, the assessment section was included to provide for an appropriate balance of public needs, private needs, and environmental analysis.

The Michigan Department of Environmental Quality (MDEQ), and its predecessor the Michigan Department of Natural Resources (MDNR), saw the need for this analysis. In processing applications for permits, the MDEQ requires that each project, whether minor/general or individual, be reviewed under these assessment criteria. Historically, the Department has utilized a document, referred to as a project review report or PRR, for the environmental analysis of each project. Exhibit B is a copy the most recent version of the PRR. Items 9 through 20 of the Exhibit clearly show the need for the assessment in its full scope prior to the final action on a permit application. Again, the need for a proper balancing of the analysis has been seen since the inception of the laws.

If one were to examine the documents carefully, it becomes apparent that the analysis completed to date only analyzes a portion of the ecological criteria required and none other criteria required under Parts 301, 303, and 325 (i.e., public/private need, riparian interest, feasible and prudent alternatives, etc.). Initiation of an appropriate study of this scope requires a considerable length of time and mobilization of the necessary resources to accomplish the defined task which would likely not be completed in the timeframe established by the legislature.

Even in the ecological realm, additional studies are required to provide a balanced analysis. Waterfowl, mammals, shorebirds, raptors, perching birds, gamefish, forage fish, and non-game fish have not been addressed. Fisherman will typically go to channel cuts through a wetland area, whether dredged or not, in search of gamefish such as smallmouth bass, largemouth bass, and pike. Waterfowl will often seek out cuts or vegetative openings for seclusion for

resting from the elements. Sandpipers, yellowlegs, and other shorebirds will work the edges of the opening and even seek out the "mudflat-like" areas for feeding. The combined proposal submitted to the MDEQ by Uzarski, Burton, and Albert, and approved for signature by the MDEQ (Bostwick signature), dated March 31, 2005, considered avian studies and suggested sites involved with these maintenance activities as minor significance. The researcher stated; "However, we have concluded that fragmentation and disturbance of the small patches that will result from the limited area of beach maintenance activities that each lake front owner is allowed by legislation would severely limit our ability to quantify these effects." If the researcher implied the relatively limited avian impacts from these small patches in the overall Michigan coastal wetland systems difficult to quantify, then possibly other impacts resulting from the limited small patches might also benefit from further examination as required by the Michigan Legislature, prior to any decision being made to "sunset" P.A. 14.

A more encompassing environmental assessment on this issue needs to be undertaken on a total impact approach and not merely limited to ecological issues. A total review would need to include the following:

- Address all the review criteria listed in both assessment Sections of 303 and 325.
- Historical perspective – A more thorough review of the physical changes regarding the fluctuations of Great Lakes water levels is needed to place the impacts into a realistic perspective. Focus should be on only those areas that have developed since the water levels have dropped. Lumping ephemeral wetland maintenance with clearing a swath through a permanent emergent coastal marsh invalidates a study of impacts specific to P.A. 14.
- Comparisons of long term loss of wetlands due to inland development or agricultural use are mischaracterizations of the issue and are simply misleading.
- The Legislature required the evaluation P.A. 14 activities. This defined the purpose of the study as well as the study area. The MDEQ report does not answer the Legislative question. The study area needs to be limited specifically to the P.A. 14 activities: the primary focus is the area from the previous high water elevation to the present shoreline (water-land interface), and possibly a defined distance water ward of

the shoreline. Dredged boating channels and deep water clearing activities are outside the scope of the legislative requirement.

- A clear understanding of property and riparian rights needs to be presented.
- Public interest both positive and negative need review (part of 303 and 325 criteria).
- Private interest both positive and negative need review (part of 303 and 325 criteria).
- The percent of impact due to the activities in contrast to the total wetland area understudy requires comparison (303 criteria).
- Economic value.
- Recreational value.
- Navigation issues (possibly under recreation).
- Alternatives available – those that are financially available (prudent) to the conventional shoreline owner.
- Shoreline sediment movement analysis.
- Impacts of invasive species.
- Cumulative impacts (303 criteria).
- Water quality issues.

A major thrust of the overall assessment should be to attempt to place an emphasis on the true significance of the proposed activities. Both sides in this discussion recognize the functions and value of the wetlands. A balance needs to be recognized that analyzes the ephemeral nature of the coastal wetlands, the values provided by the wetland and the true short term changes due to vegetative clearing and beach grooming activities within the framework that the wetland will likely disappear with a rise in water levels.

The new General Permit for Limited Removal of Vegetation for Great Lakes Access as defined in MDEQ Public Notice dated April 14, 2006 appears to

conflict with P.A. 14, and the Michigan Legislature's intent. Careful review of the ramifications to the proposed General Permit limitations and Conditions are suggested.

Recommendations:

1. Disallow the June 5, 2006 sunset of P.A. 14 as currently suggested by the MDEQ.
2. Maintain status quo under present procedures, until appropriate studies to address P.A. 14 beach grooming and vegetative clearing activities are undertaken, or until November 2007 as dictated by the Legislative law, whichever comes first.